Regional HIV/AIDS Epidemiologic Profile of Middlesex County, Massachusetts: 2011

Recent changes to the presentation of Massachusetts HIV/AIDS surveillance data

Effective January 1, 2011, the Massachusetts Department of Public Health (MDPH), Bureau of Infectious Diseases, HIV/AIDS fact sheets, epidemiologic reports and other HIV data presentations have been updated to remove all HIV/AIDS cases that were first diagnosed while residing in another state before being reported in Massachusetts. As of January 1, 2011, this resulted in the removal of 2,297 HIV/AIDS cases, of which 739 have died and 1,558 were living. These persons living with HIV/AIDS may currently reside and receive care in the Commonwealth. The total number of persons living in Massachusetts with HIV/AIDS, irrespective of location of diagnosis, is the basis for MDPH service planning. This change is partially a result of increased activities required by the Centers for Disease Control and Prevention (CDC) for de-duplication among states in an effort to identify cases that are counted multiple times in the National HIV/AIDS surveillance system. The cases are assigned to the state that reports the earliest date of AIDS diagnosis, if available. If the case has not progressed to AIDS, the case is assigned to the state with the earliest HIV diagnosis date. Please note that all previous HIV/AIDS fact sheets, data reports and presentations include cases that may have been first diagnosed in another state.

Also effective January 1, 2011, the Massachusetts Department of Public Health (MDPH) HIV/AIDS fact sheets, epidemiologic reports, and other data presentations have been updated to eliminate the presumed heterosexual exposure mode category for males: those cases have been reassigned to the no identified risk (NIR) exposure mode category. The presumed heterosexual exposure mode category was used with the intention of identifying HIV exposure mode for females when sex with males is the only reported risk factor, there is no evidence of current or past injection drug use (IDU), and behavioral risk and HIV status information about male sexual partners are unknown. Twenty-nine percent of females living with HIV/AIDS and 41% of recent HIV diagnoses among females are reported in the presumed heterosexual exposure mode category. The application of the presumed heterosexual exposure mode category to males is overly inclusive in that female to male HIV transmission is biologically less probable, and there are alternate exposure modes that are possible for males, including sex with other men (MSM) or IDU. The CDC reports males diagnosed with HIV/AIDS who report sex with females as their only risk factor, without corresponding partner risk or HIV status information, in the NIR exposure mode category. This revision to report presumed heterosexual male HIV/AIDS cases as NIR will bring Massachusetts HIV/AIDS case reporting for males in alignment with CDC standards. The MDPH will maintain presumed heterosexual and heterosexual exposure mode categories for females.

Table 1. Total number of people reported with HIV infection or AIDS¹ by mortality status on December 31, 2010: Middlesex County, Massachusetts²

	N	%
People Living with HIV/AIDS	2,953	63%
People Reported with HIV or AIDS who are Deceased	1,751	37%
Total Number of People Reported with HIV Infection or		
AIDS	4,704	100%

¹ Does not include individuals diagnosed with HIV infection (non-AIDS) who died prior to January 1, 1999 or who were not in care on January 1, 1999
² Effective, January 1, 2011 the Massachusetts Department of Public Health, HIV/AIDS fact sheets, epidemiologic reports, and other

Data Source: MDPH HIV/AIDS Surveillance Program, Data as of 1/1/11

Table 2. Average annual rate of HIV infection diagnosis from 2007 to 2009 and HIV/AIDS prevalence rate on 12/31/10¹: Middlesex County, Massachusetts²

Average annual HIV diagnosis rate from 2007–2009	Average rate per 100,000	Average annual number of HIV diagnoses
Middlesex County, MA	8.0	117.3
Massachusetts Total	9.4	607.3

HIV/AIDS prevalence rate		Number of people
on 12/31/10	Rate per 100,000	living with HIV/AIDS
Middlesex County, MA	201.7	2,953
Massachusetts Total	273.7	17,621

¹ The denominators for prevalence calculations are based on year 2005 population estimates from the MDPH Bureau of Health Statistics, Research and Evaluation.

Data Source: MDPH HIV/AIDS Surveillance Program, Data as of 1/1/11

² Effective, January 1, 2011 the Massachusetts Department of Public Health, HIV/AIDS fact sheets, epidemiologic reports, and other data presentations have been updated to remove all HIV/AIDS cases that were first diagnosed in another state before being reported in Massachusetts.

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Table 3. People living with HIV/AIDS¹, deaths among people reported with HIV/AIDS, and newly diagnosed HIV infections by year²: 2000–2009, Middlesex County, Massachusetts³

Year	HIV/AIDS Prevalence	Deaths among those with HIV/AIDS	Diagnosis of HIV Infection
0000	4.070	50	400
2000	1,878	50	190
2001	1,988	64	174
2002	2,122	41	175
2003	2,257	43	178
2004	2,372	49	164
2005	2,502	38	168
2006	2,603	42	144
2007	2,701	25	123
2008	2,789	32	120
2009	2,867	31	109

¹ Number of people living with HIV/AIDS on 12/31 of each year

Data source: MDPH HIV/AIDS Surveillance Program, Data as of 1/1/11

²Reflects year of HIV infection diagnosis among all individuals reported with HIV infection, with or without an AIDS diagnosis for

the most recently available 10 year period after the implementation of HIV infection reporting in 1999.
³ Effective, January 1, 2011 the Massachusetts Department of Public Health, HIV/AIDS fact sheets, epidemiologic reports, and other data presentations have been updated to remove all HIV/AIDS cases that were first diagnosed in another state before being reported in Massachusetts.

Table 4. People diagnosed with HIV infection from 2007–2009¹ and people living with HIV/AIDS on December 31, 2010 by gender, place of birth, race/ethnicity, exposure mode, age at HIV infection diagnosis and current age: Middlesex County, Massachusetts²

	HIV Infection Diagnoses		PLV	VH/A	
Gender:	N	%	N	%	
Male	249	71%	2,032	69%	
Female	103	29%	921	31%	
Place of Birth:	N	%	N	%	
US _	160	45%	1,628	55%	
Puerto Rico/US Dependency ³	16	5%	198	7%	
Non-US	176	50%	1,127	38%	
Race/Ethnicity:	N	%	N	%	
White (non-Hispanic)	132	38%	1,344	46%	
Black (non-Hispanic)	128	36%	993	34%	
Hispanic/Latino _	72	20%	512	17%	
Other/Undetermined ⁴	20	6%	104	4%	
Exposure Mode:	N	%	N	%	
Male-to-male sex (MSM)	146	41%	1,070	36%	
Injection Drug Use (IDU)	14	4%	427	14%	
MSM/IDU	7	7	83	3%	
Heterosexual Sex	39 ⁷	11%	408	14%	
Other		'	75	3%	
Total Undetermined	138	39%	890	30%	
Presumed Heterosexual Sex ⁵	53	15%	356	12%	
Undetermined ⁶	85	24%	534	18%	
Age:	N	%	N	%	
	At Diagno		On December 31, 2010		
Under 13	2	1%	14	0%	
13 to 19	5	1%	29	1%	
20 to 24	34	10%	53	2%	
25 to 29	36	10%	114	4%	
30 to 34	59	17%	190	6%	
35 to 39	56	16%	341	12%	
40 to 44	52	15%	543	18%	
45 to 49	50	14%	651	22%	
50 to 54	25	7%	485	16%	
55 to 59	15	4%	254	9%	
60+	18	5%	279	9%	
Total	352	100%	2,953	100%	

¹Reflects year of HIV infection diagnosis among all individuals reported with HIV infection, with or without an AIDS diagnosis for the most recently available three-year period after the implementation of HIV infection reporting in 1999.

² Effective, January 1, 2011 the Massachusetts Department of Public Health, HIV/AIDS fact sheets, epidemiologic reports, and other data presentations have been updated to remove all HIV/AIDS cases that were first diagnosed in another state before being reported in Massachusetts.

³ Ninety-seven percent of all people diagnosed with HIV infection in MA who were born in a US dependency were born in Puerto

Ninety-seven percent of all people diagnosed with HIV infection in MA who were born in a US dependency were born in Puerto Rico, 1% were born in the US Virgin Islands, <1% were born in American Samoa, <1% were born in Guam and 3% were born in an unknown dependency.

Other/Undetermined includes Asian/Pacific Islander, American Indian/Alaska Native and people of unspecified race/ethnicity
 Includes female sex with male of unknown HIV status or risk. This category is limited to females.

⁶ Includes male sex with female of unknown HIV status or risk, those still being followed up for risk information, those who have died with no determined risk, and those lost to follow-up.

⁷ Numbers less than 5 for localities with populations of less than 50,000 are suppressed for the assurance of confidentiality. Data Source: MDPH HIV/AIDS Surveillance Program (percentages may not add up to 100% due to rounding), Data as of 1/1/11

Table 5. People living with HIV/AIDS on December 31, 2010 by gender and race/ethnicity: Middlesex County, Massachusetts¹

	Male	Female		
Race/Ethnicity:	N %		N	%
White (non-Hispanic)	1,098	54%	246	27%
Black (non-Hispanic)	476	23%	517	56%
Hispanic/Latino	378	19%	134	15%
Other/Undetermined ²	80	4%	24	3%
Total	2,032	100%	921	100%

¹ Effective, January 1, 2011 the Massachusetts Department of Public Health, HIV/AIDS fact sheets, epidemiologic reports, and other data presentations have been updated to remove all HIV/AIDS cases that were first diagnosed in another state before being reported in Massachusetts.

Table 6. People living with HIV/AIDS on December 31, 2010 by gender and exposure mode: Middlesex County, Massachusetts¹

	Male		Female		
Exposure Mode:	N	%	N	%	
Male-to-male sex (MSM)	1,070	53%	N/A	N/A	
Injection drug use (IDU)	261	13%	166	18%	
MSM/IDU	83	4%	N/A	N/A	
Heterosexual sex	119	6%	289	31%	
Other	42	2%	33	4%	
Total Undetermined	457	22%	433	47%	
 Presumed heterosexual sex² 	N/A	N/A	356	39%	
 Undetermined³ 	457	22%	77	8%	
Total	2,032	100%	921	100%	

¹ Effective, January 1, 2011 the Massachusetts Department of Public Health, HIV/AIDS fact sheets, epidemiologic reports, and other data presentations have been updated to remove all HIV/AIDS cases that were first diagnosed in another state before being reported in Massachusetts.

² Other/Undetermined includes Asian/Pacific Islander, American Indian/Alaska Native and people of unspecified race/ethnicity.

Data Source: MDPH HIV/AIDS Surveillance Program (percentages may not add up to 100% due to rounding), data as of 1/1/11

² Includes female sex with male of unknown HIV status or risk. This category is limited to females.

³ Includes male sex with female of unknown HIV status or risk, those still being followed up for risk information, those who have died with no determined risk, and those lost to follow-up. N/A=Not Applicable

Data Source: MDPH HIV/AIDS Surveillance Program (percentages may not add up to 100% due to rounding), data as of 1/1/11

Table 7. People diagnosed with HIV infection by gender and year of diagnosis: Middlesex County, Massachusetts¹, 2000–2009²

	Male	Male			
	N	%	N	%	Total
2000	125	66%	65	34%	190
2001	115	66%	59	34%	174
2002	104	59%	71	41%	175
2003	125	70%	53	30%	178
2004	108	66%	56	34%	164
2005	114	68%	54	32%	168
2006	100	69%	44	31%	144
2007	84	68%	39	32%	123
2008	83	69%	37	31%	120
2009	82	75%	27	25%	109

¹ Effective, January 1, 2011 the Massachusetts Department of Public Health, HIV/AIDS fact sheets, epidemiologic reports, and other data presentations have been updated to remove all HIV/AIDS cases that were first diagnosed in another state before being reported in Massachusetts.

Table 8. People diagnosed with HIV infection by race/ethnicity and year of diagnosis: Middlesex County, Massachusetts¹, 2000–2009²

	White	NH	Black	Black NH Hispanic/Latino		Othe Undeterr		Total	
	N	%	N	%	N	%	N	%	
2000	83	44%	81	43%	21	11%	5	3%	190
2001	65	37%	64	37%	36	21%	9	5%	174
2002	68	39%	75	43%	21	12%	11	6%	175
2003	72	40%	67	38%	31	17%	8	4%	178
2004	68	41%	65	40%	23	14%	8	5%	164
2005	68	40%	69	41%	26	15%	5	3%	168
2006	62	43%	42	29%	34	24%	6	4%	144
2007	48	39%	43	35%	28	23%	4	3%	123
2008	39	33%	46	38%	23	19%	12	10%	120
2009	45	41%	39	36%	21	19%	4	4%	109

¹ Effective, January 1, 2011 the Massachusetts Department of Public Health, HIV/AIDS fact sheets, epidemiologic reports, and other data presentations have been updated to remove all HIV/AIDS cases that were first diagnosed in another state before being reported in Massachusetts.

² Reflects year of HIV infection diagnosis among all individuals reported with HIV infection, with or without an AIDS diagnosis for the most recently available 10 year period after the implementation of HIV infection reporting in 1999.

Data Source: MDPH HIV/AIDS Surveillance Program (percentages may not add up to 100% due to rounding), data as of 1/1/11

² Reflects year of HIV infection diagnosis among all individuals reported with HIV infection, with or without an AIDS diagnosis for the most recently available 10 year period after the implementation of HIV infection reporting in 1999.

³ Other/Undetermined includes Asian/Pacific Islander, American Indian/Alaska Native and people of unspecified race/ethnicity. NH = Non-Hispanic

Data Source: MDPH HIV/AIDS Surveillance Program (percentages may not add up to 100% due to rounding), data as of 1/1/11

Table 9. People diagnosed with HIV infection by place of birth and year of diagnosis: Middlesex County, Massachusetts¹, 2000–2009²

	US		Puerto R US Depend		Non-U	IS	
	N	%	N	%	N	%	Total
2000	101	53%	13	7% 70/	76 79	40%	190
2001 2002	83 72	48% 41%	13 6	7% 3%	78 97	45% 55%	174 175
2003 2004	82 78 ⁴	46% 48% ⁴	9 7 4	5% 4% ⁴	87 79	49% 48%	178 164 168
2005 2006 2007	80 ⁴	56% ⁴	 7 ⁴	5% ⁴	89 57 65	53% 40% 53%	144 123
2008 2009	53 53	44% 49%	7 5	6% 5%	60 51	50% 47%	120 109
			7 5				

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Table 10. People diagnosed with HIV infection by exposure mode and year of diagnosis: Middlesex County, Massachusetts¹, 2000–2009²

	MS	M	ID	U	MS ID		HT	sx	Oth	ner	Pre HTS			eter- ned ⁴	Total
	N	%	N	%	N	%	N	%	N	%	N	%	N	%	N
2000	59	31%	24	13%	5	5	32	17%	5	5	34	18%	36	19%	190
2001	51	29%	22	13%	 5	 5	36	21%	 5	 5	21	12%	36	21%	174
2002	50	29%	16	9%	 5	<u></u> 5	38	22%	<u></u> 5	 5	34	19%	35	20%	175
2003	63	35%	17	10%	 5	<u></u> 5	21	12%	 5	 5	28	16%	44	25%	178
2004	47	29%	13	8%	 5	<u></u> 5	32	20%	<u></u> 5	 5	23	14%	42	26%	164
2005	56	33%	16	10%	6	4%	24	14%	0	0%	27	16%	39	23%	168
2006	58	40%	19	13%	 5	<u></u> 5	17	12%	<u></u> 5	 5	17	12%	27	19%	144
2007	46	37%	7	6%	 5	<u></u> 5	14	11%	<u></u> 5	 ⁵	17	14%	36	29%	123
2008	48	40%	5	 ⁵	5	4%	12	10%	<u></u> 5	 5	22	18%	28	23%	120
2009	52	48%	 ⁵	 ⁵	6	6%	13	12%	 ⁵	 ⁵	14	13%	21	19%	109

¹ Effective, January 1, 2011 the Massachusetts Department of Public Health, HIV/AIDS fact sheets, epidemiologic reports, and other data presentations have been updated to remove all HIV/AIDS cases that were first diagnosed in another state before being reported in Massachusetts.

² Reflects year of HIV infection diagnosis among all individuals reported with HIV infection, with or without an AIDS diagnosis for the most recently available 10 year period after the implementation of HIV infection reporting in 1999.

³ Ninety-seven percent of all people diagnosed with HIV infection in MA who were born in a US dependency were born in Puerto Rico, 1% were born in the US Virgin Islands, <1% were born in American Samoa, <1% were born in Guam and 3% were born in an unknown dependency.

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² Reflects year of HIV infection diagnosis among all individuals reported with HIV infection, with or without an AIDS diagnosis for the most recently available 10 year period after the implementation of HIV infection reporting in 1999.

³ Includes female sex with male of unknown HIV status or risk. This category is limited to females.

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⁵ Numbers less than 5 for localities with populations of less than 50,000 are suppressed for the assurance of confidentiality.

MSM = Male-to-Male Sex; IDU = Injection Drug Use; MSM/IDU = Male-to-Male Sex and Injection Drug Use; HTSX = Heterosexual Sex; Pres. HTSX = Presumed Heterosexual Sex

Data Source: MDPH HIV/AIDS Surveillance Program (percentages may not add up to 100% due to rounding), data as of 1/1/11

Table 11. People diagnosed with HIV infection and AIDS within two months and all people diagnosed with HIV infection by year of diagnosis: Middlesex County, Massachusetts¹, 2000–2009²

	HIV and AIDS diagnosed within two months	All HIV infection diagnoses	% diagnosed with HIV and AIDS within two months
Year:	N	N	%
2000	75	190	39%
2001	67	174	39%
2002	62	175	35%
2003	54	178	30%
2004	60	164	37%
2005	70	168	42%
2006	54	144	38%
2007	45	123	37%
2008	35	120	29%
2009	30	109	28%

¹ Effective, January 1, 2011 the Massachusetts Department of Public Health, HIV/AIDS fact sheets, epidemiologic reports, and other data presentations have been updated to remove all HIV/AIDS cases that were first diagnosed in another state before being reported in Massachusetts.

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² Reflects year of HIV infection diagnosis among all individuals reported with HIV infection, with or without an AIDS diagnosis for the most recently available ten-year period after the implementation of HIV infection reporting in 1999. Data Source: MDPH HIV/AIDS Surveillance Program, data as of 1/1/11

Table 12. People diagnosed with HIV infection and AIDS within two months and all people diagnosed with HIV infection by gender, race/ethnicity, and place of birth: Middlesex County, Massachusetts, 2007–2009²

	HIV and AIDS diagnosed within two	All HIV infection	% diagnosed with HIV and AIDS within two
	months	diagnoses	months
Gender:	N	N	%
Male Female	83 27	249 103	33% 26%
Race/Ethnicity:	N	N	%
White (non-Hispanic) Black (non-Hispanic) Hispanic/Latino Other/Undetermined ³	35 38 31 6	132 128 72 20	27% 30% 43% 30%
Place of Birth:	N	N	%
US Puerto Rico/US Dependencies ⁴ Non-US Total	39 5 66 110	160 16 176 352	24% 31% 38% 31%

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² Reflects year of HIV infection diagnosis among all individuals reported with HIV infection, with or without an AIDS diagnosis for the most recently available three-year period after the implementation of HIV infection reporting in 1999. ³ Other/Undetermined includes Asian/Pacific Islander, American Indian/Alaska Native and people of unspecified

^{*}Other/Undetermined includes Asian/Pacific Islander, American Indian/Alaska Native and people of unspecified race/ethnicity.

⁴ Ninety-nine percent of people diagnosed with HIV infection from 2007–2009 who were born in a US dependency were born in Puerto Rico, <1% were born in the US Virgin Islands and <1% were born in Guam.

Data Source: MDPH HIV/AIDS Surveillance Program (percentages may not add up to 100% due to rounding), data as of 1/1/11